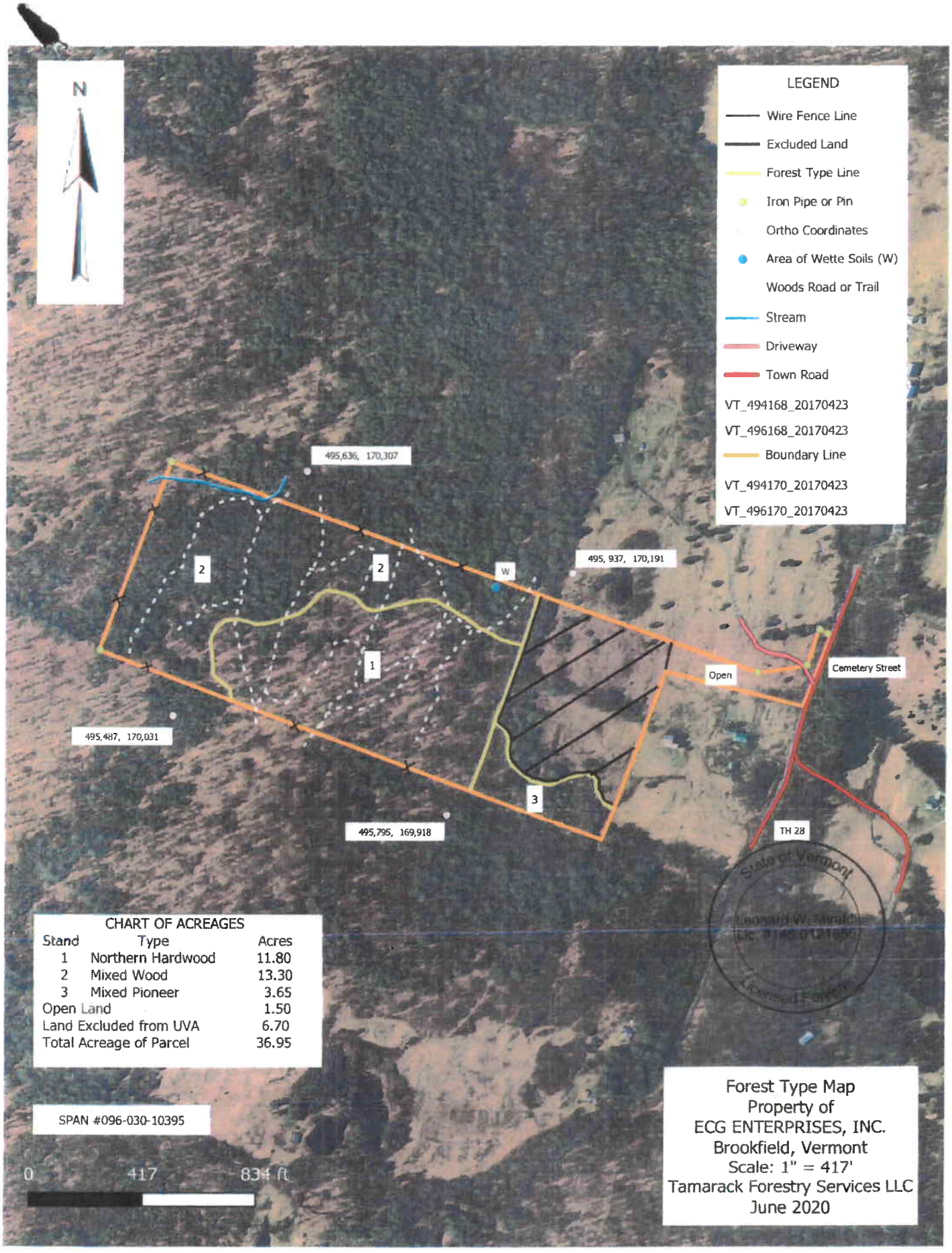
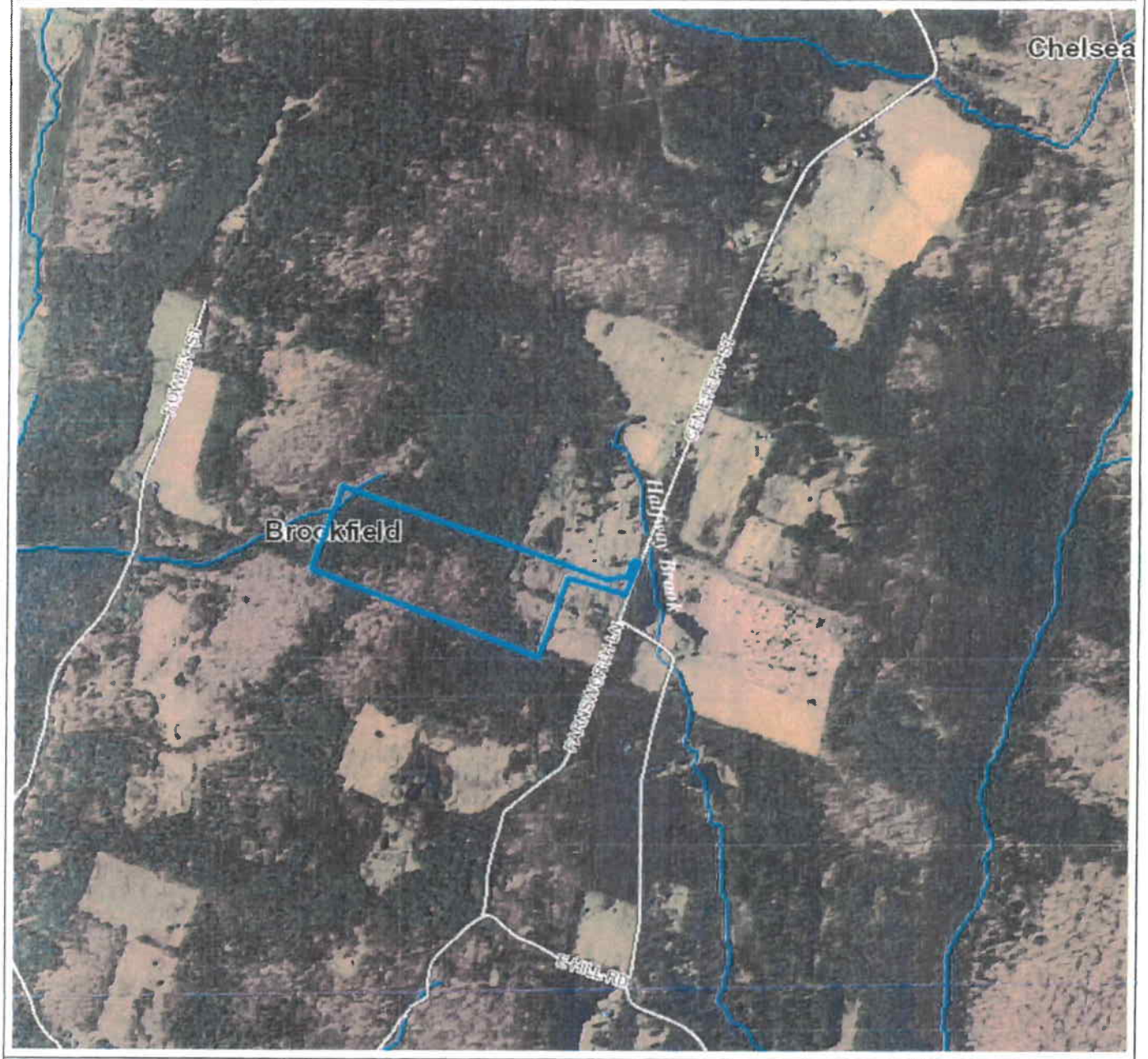

N
LEGEND
Wire Fence Line
Excluded Land
Forest Type Line
Iron Pipe or Pin
Ortho Coordinates
Area of Wette Soils (W)
Woods Road or Trail
Stream
Driveway
Town Road
VT_494168_20170423
VT_496168_20170423
Boundary Line
VT_494170_20170423
VT_496170_20170423
495,636, 170,307
495, 937, 170,191
495,487, 170,031
495,795, 169,918
2
2
1
3
W
Open
Cemetery Street
TH 28
State of Vermont
Leonard W. Mirabile
Lic. #146.0121886
Licensed Forester
CHART OF ACREAGES
Stand Type Acres
1 Northern Hardwood 11.80
2 Mixed Wood 13.30
3 Mixed Pioneer 3.65
Open Land 1.50
Land Excluded from UVA 6.70
Total Acreage of Parcel 36.95
SPAN #096-030-10395
0 417 834 ft
Forest Type Map
Property of
ECG ENTERPRISES, INC.
Brookfield, Vermont
Scale: 1" = 417'
Tamarack Forestry Services LLC
June 2020

VERMONT

Locator Map ECG Enterprises

Vermont Agency of Natural Resources

vermont.gov



LEGEND

Parcels (non-standardized)

Roads

- Interstate
- Principal Arterial
- Minor Arterial
- Major Collector
- Minor Collector
- Local

NOTES

Map created using ANR GIS mapping techology.

1: 14,582

July 21, 2020

741 0 0 370.00 741 0 Meters

WGS_1984_Web_Mercator_Auxiliary_Sphere

1" = 1215 Ft. 1cm = 146 Meters

THIS MAP IS NOT TO BE USED FOR NAVIGATION

FOREST RESOURCE MANAGEMENT PLAN
for the property of
ECG Enterprises, Inc.
36.95acres in
Brookfield, Vermont
SPAN# 096-030-10395

Approved By:

Charles Isenberg 7/13/2020
Charles G. Isenberg Date

8/18/2020
County Forester Date

UPDATE DUE BY
4/1/ 2031

Owner:

[redacted]

Prepared By:
Tamarack Forestry Services LLC
Len Miraldi
34 Stowell Road
Norwich, VT 05055
VT Forester Lic. #148.0121856
len.miraldi@gmail.com

June 2020

State of Vermont
Leonard W. Miraldi
Lic. #148.0121856
Licensed Forester

General Information

Tamarack Forestry Services, LLC, of Norwich, Vermont has developed this resource management plan as an update to a plan written in 2011 by Harwood Forestry Services, Inc., of Tunbridge, Vermont. The purpose of this update is to aid the landowners in managing their forest resources and to comply with Use Value Appraisal standards and requirements, which require updating management plans every ten years. This document is written for a parcel of land located in Brookfield, Vermont that is owned by ECG Enterprises, Inc.

A summary of acreage distribution is as follows:
ECG Enterprises Inc. – Brookfield, Vermont
SPAN # 096-030-10395

Productive Forest Land	28.75 Acres
Non-Productive Forest	0.0 Acres
Open Land	1.50 Acres
Agricultural Land	0.0 Acres
Excluded Land	6.70 Acres
Total Acreage	36.95 Acres

The property can be located from East Brookfield village and VT Route 14 by traveling east on East Hill Road for approximately 1.8 miles to the "T" intersection with Cemetery Street. Turn left onto Cemetery Street and proceed 0.7 miles to a private, shared driveway on the left with a posted number (#691) at the entrance. This shared driveway entrance provides access into the subject property as well as the lands owned by Thomas Anderson and Jennifer Stamp.

This property consists of 28.75 acres of forest land and 8.2 acres of open land. The open land occupies the eastern extent of the parcel. The forested portion of the property is a combination of a small pioneer stand of a mixed forest type that has developed in the past 35-40 years. A very nice northern stand is seen west of the open area and near the parcel's highest elevation. This northern hardwood stand has been developed through natural succession and well executed management practices. A mixed hemlock/hardwood stand occupies the lower slopes across the western end of the property and also extends along the parcel's northern boundary. The topography within the property varies, with the land gradually rising from an elevation of about 1,550' near the access point on Cemetery Street to approximately 1,620' near a height of land at the eastern edge of the hardwood stand. From this point, the terrain begins sloping westward to an elevation of about 1,400' in a series of gradual to moderate slopes that are punctuated by small benches that nicely facilitate a series of woods roads and trails. These well established trails are in a stable condition and do not appear to receive much use at this time. It was also noted that the trail system has a north/south orientation, that follows the topography and leaves the property on either end, indicating that this parcel was larger in size at one time. Minor alterations to this

trail network will allow for east/west transportation of forest products during future management activities on the parcel.

Ownership Objectives

The objectives of ownership for the ECG, Inc., property could be summarized as follows:

1. Maintain a healthy and economically viable forest resource using sustainable, socially responsible and environmentally sensitive practices
2. Develop and implement management strategies that will perpetuate and improve wildlife habitat conditions. Seek and use professional recommendations and oversight from wildlife biologists and foresters when appropriate.
3. Protect all water resources using acceptable management practices for the benefit of both water quality and riparian wildlife habitat protection. Develop a standard for riparian buffer corridors that allows for reduced timber harvesting intensities in these areas and protects wildlife habitats along these sensitive resources. Acceptable Management Practices (AMP's) as outlined in "Acceptable Management Practices for Maintaining Water Quality on Logging Jobs in Vermont," a VT Dept. Forests, Parks and Recreation publication, will be implemented throughout the property as required.
4. Protect and preserve historic and cultural features such as old town roads, cemeteries, stone walls and cellar holes, whenever possible.
5. Utilize low-impact strategies to the extent practical to manage the resources within this property. This is meant to include small scale equipment for harvesting and road building/maintenance and an integrated pest management (IPM) approach to the use of pesticides or herbicides.

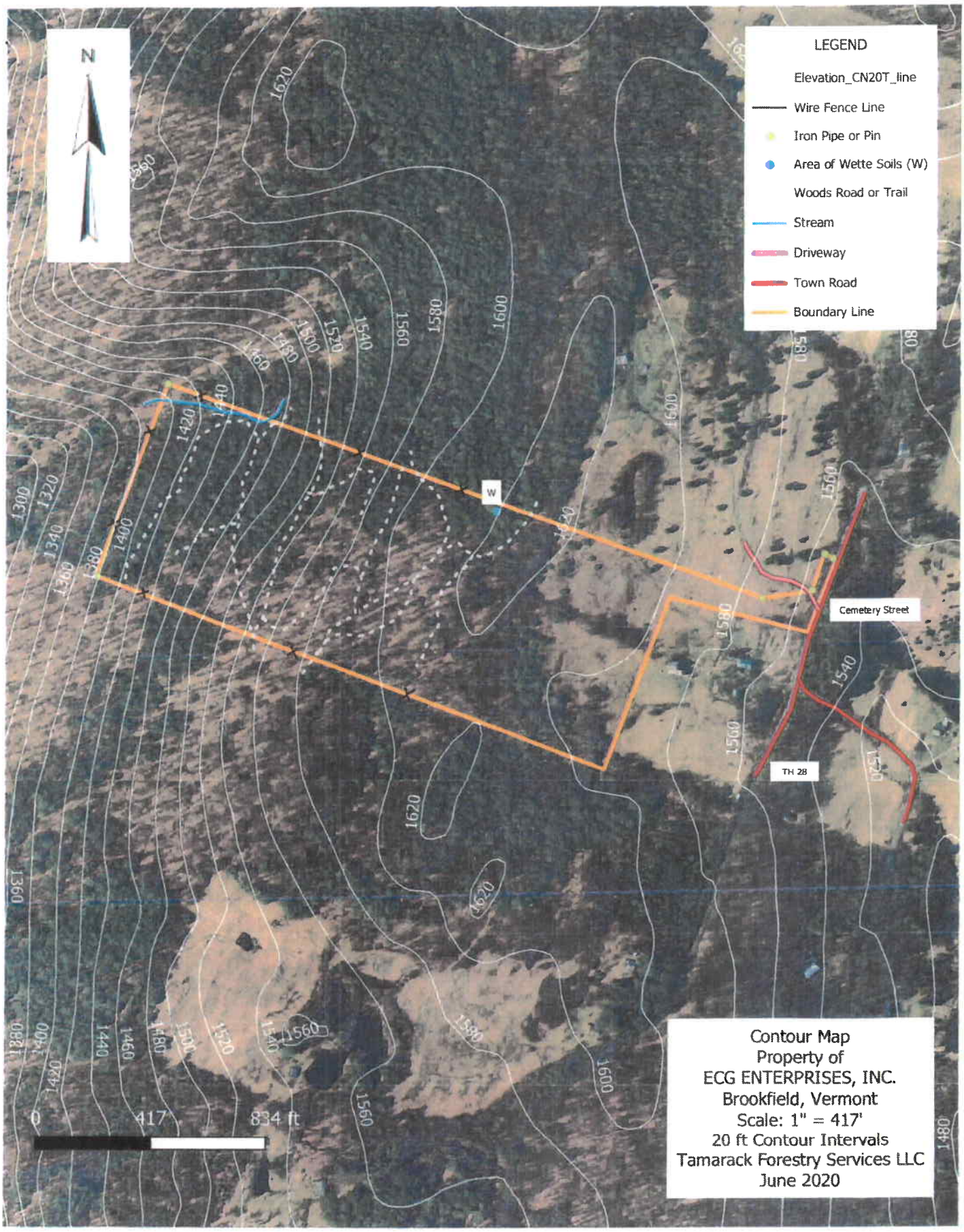
Soils:

The soil types present within the property, as mapped by the USDA Natural Resources Conservation Service and downloaded from the "Vermont Agency of Natural Resources Atlas" are Buckland, Cabot, Peacham, and Vershire-Glover complex. These soils represent good soils for growing the timber species present and are within the Vermont productivity class of Site Class 2 (able to grow 50 to 85 cubic feet/acre/year) and/or Site Class 1 (able to grow >85 cubic feet/acre/year).

A forest soils ability to grow trees is based on its productivity potential. The productivity potential of the forest soils is often determined by the site index, which is a measure of the average height in feet that a dominant or co-dominant tree of a specific species reaches in a specified number of years (generally 50 years). The site index represents the productivity potential of the soil to grow trees (the higher the site index, the better the site productivity).

Boundary Lines:

For the most part, the boundary lines associated with this property follow old wire fence lines and sections of stone wall. The lines were painted some time ago, probably when this parcel was divided from a larger property. The southern boundary line is very obvious; it has recently been flagged during a timber harvest on the neighbouring parcel. The western and northern boundary lines are discoverable and for the most part obvious, though the paint is fading. Property lines along the eastern and southern portions of the open land are marked by more modern wire fence. The northern boundary of the open land is marked by wooden posts set at visible distances along the line.


N
LEGEND
Elevation_CN20T_line
Wire Fence Line
Iron Pipe or Pin
Area of Wette Soils (W)
Woods Road or Trail
Stream
Driveway
Town Road
Boundary Line
W
Cemetery Street
TH 28
0
417'
834 ft
Contour Map
Property of
ECG ENTERPRISES, INC.
Brookfield, Vermont
Scale: 1" = 417'
20 ft Contour Intervals
Tamarack Forestry Services LLC
June 2020

It is recommended that the boundary lines be maintained in the future. This would help ensure that the limits of the parcel are well represented on the ground. The boundary lines should be repainted every 8 to 10 years.

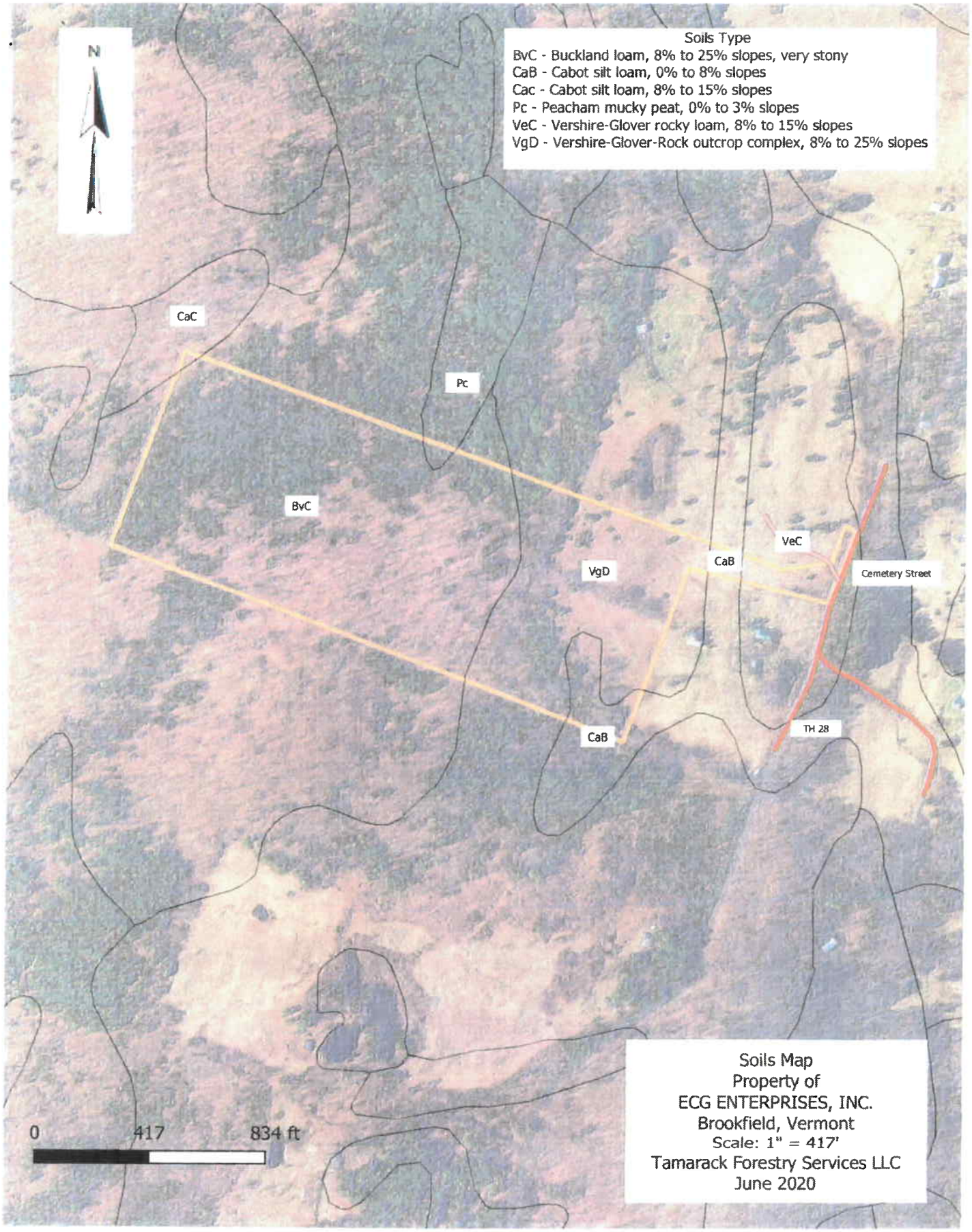
Cultural/Historic Features:
During the field examination of this property for the preparation of this planning document, cultural or historic features that were noted include well established access trails and sections of stone wall and/or old wire fence, an indication of the past farming history and land ownership patterns within the area.

Rare, Threatened and Endangered Species:
A review of the Vermont Fish and Wildlife Department, Non-game and Natural Heritage Program database found no identified rare, threatened or endangered species on this parcel. No state-mapped wetlands have been identified by the Vermont Fish and Wildlife Department, however a very important wetland feature (upland vernal pool) is found along the shared boundary with the abutting property to the north (see Forest Type Map). The northwestern half of the property hosts a portion of a large, mapped deer wintering area or deer yard (see Deer Yard Map) that occupies an extensive area to both the north and the south of this parcel. Both of these wildlife habitat features are important to the survival of numerous species of wildlife and should be protected through the establishment of appropriate management buffers where timber harvesting intensities would be focused upon habitat enhancement or protection with a lesser focus on timber production.

Wildlife Ecology and Habitat Conditions:
Throughout the forested landscape, plants and animals interact and play a role in the total working and changing forest environment. Animals interact with each other and with other living and non-living components of the forest in what is known as the forest ecosystem. Understanding the natural progression of change that occurs in a forest during its development and growth enables us to understand the ways in which the forest and wildlife interact.

Forests are continually changing as trees grow and die and are replaced by new trees. Some changes may proceed relatively unnoticed, while other changes can occur more rapidly as a result of natural or human disturbance. Such disturbances (such as heavy logging or forest fire) can occur in areas both large and small, which may change the species composition and structure of the forest.
Where these clearings or openings have been created, full sunlight is permitted to reach the forest floor. The first herbaceous plants, shrubs and trees that appear in these openings are called pioneer species (aspen, paper and gray birch, etc.). These species grow rapidly in the full sunlight but are shade intolerant. Shortly after the pioneer species dominate the site, more shade tolerant species begin to establish themselves. These intermediate species, such as oak and white ash can grow in the partial shade of the established pioneer species. Because these intermediate species are longer lived, they will eventually overtop the pioneers, which will begin to decline and die from a lack of sunlight.

This intermediate stage of forest succession creates a much denser crown canopy and can occupy the site for a very long time. Gradually, an understory of shade tolerant species, such as sugar maple, beech and hemlock, begin to develop. These species are relatively slow growing but out-compete other less tolerant species in the heavy shade. Eventually, as the overstory trees begin to age and decline, these tolerant species begin to emerge to form the new forest overstory. The shade tolerant species are the only ones that can reproduce well under their own shade, and in the absence of a disturbance, can occupy the site indefinitely as the climax forest. In reality, a climax forest may be present for a time, but at some time in


N
Soils Type
BvC - Buckland loam, 8% to 25% slopes, very stony
CaB - Cabot silt loam, 0% to 8% slopes
Cac - Cabot silt loam, 8% to 15% slopes
Pc - Peacham mucky peat, 0% to 3% slopes
VeC - Vershire-Glover rocky loam, 8% to 15% slopes
VgD - Vershire-Glover-Rock outcrop complex, 8% to 25% slopes
CaC
Pc
BvC
VeC
CaB
VgD
Cemetery Street
CaB
TH 28
0
417
834 ft
Soils Map
Property of
ECG ENTERPRISES, INC.
Brookfield, Vermont
Scale: 1" = 417'
Tamarack Forestry Services LLC
June 2020

the life of the stand, a disturbance will occur which will revert all or a portion of the stand back to an earlier stage of forest succession.

Succession is an important factor determining where a given wildlife species is found within the forest and surrounding landscape. Wildlife adapt to specific stages of succession. Some species may require just one stage of succession for survival, while others may require several stages.
The living portion of the ecosystem is known as a community. The area that a community occupies can vary in size from a small portion of a property to the much larger, overall landscape of an area.

Communities can vary from location to location and they also change with time. Plant communities are changed through forest succession, as different species grow and predominate while others are reduced or replaced. Animal communities also change as the composition of plant communities change. For example, a brushy clearing suitable as cottontail rabbit habitat, in time will become overgrown, becoming less suitable as rabbit habitat, but may develop into a preferred feeding area for ruffed grouse.

The health and vigor of a given species of wildlife on a particular piece of woodland can be evaluated by determining the property's carrying capacity. The carrying capacity is the maximum population density that can be sustained from year to year for a species living on a particular piece of land. When a population is at or below carrying capacity, each individual has sufficient food and space to survive. An increase in a population already at carrying capacity causes crowding and places a strain on the available food supply and other survival requirements. The carrying capacity can change due to changing conditions within the forest ecosystem. The production of certain food crops can vary annually and change the carrying capacity over successive years.

During future forest management activities, the woodlot should be managed to benefit wildlife populations as well as improve conditions for timber production. Wildlife habitat management within the woodlot needs to focus on creating habitat conditions throughout the property that will benefit a number of wildlife species.

A good wildlife habitat is composed of three main elements: cover (shelter), food and water. These elements, although not always found within a single property, must be available in proper proportions and located within appropriate distances of one another.

Cover is the protective element within the animals' habitat and plays an important role in a number of the animals' necessary life functions (breeding, hiding, resting, traveling, etc.). Cover provides the physical structure to a wildlife habitat. In general, vegetation fulfills the cover requirement of most wildlife species, but ledges, caves, burrows and man-made structures are also utilized. When manipulating forest vegetation to provide cover for wildlife, it is important to know the cover requirements of the particular species involved. The need for cover will usually change with the seasons and attempts should be made through proper forest management to enhance a species year-round cover requirement.

To maintain good health for growth and reproduction, animals must have an adequate supply of nutritious foods. The presence of food does not always guarantee the presence of wildlife. A food supply that is located too far from protective cover will not be utilized to its fullest extent. Vegetation however, can serve as both cover and food source for wildlife, depending upon species. The seasons and weather play important roles in determining the food supplies available. For example, insects and mast crops (nuts, fruits, berries, etc.) are only seasonally available to wildlife, although these seasonal foods will play

an important role in preparing the animals for long periods when food may be somewhat more difficult to find, particularly in the winter months. As is the case with cover, requirements for food vary with species and seasonal availability. All wildlife species have preferred foods, which may vary with the seasons and the particular needs of the animal. Maintaining or increasing diversity within a woodlot will help to promote a variety of foods available to wildlife.

Water is essential for all wildlife. Sources of water within a wildlife habitat include dew, succulent vegetation and open water. Not all animals need open water although most animals will tend to use ponds, streams or springs when available. Water sources should not be altered in any way and should be protected at all times. Streams should be protected through the establishment of a buffer strip of uncut trees and other vegetation at least three times the stream width to help prevent erosion, siltation and increased water temperatures. Buffer strips should be maintained around all water resources to retard and filter surface runoff and to help minimize siltation and the loss of vegetation along embankments.

Another important wildlife habitat component is found within the edges of vegetation changes, for example, the edge between a hardwood and softwood stand or edges of roads or fields. The actual area of the vegetative transition zone is known as the ecotone. Such areas have great plant diversity and usually sustain more wildlife than other areas. Wildlife inhabiting the field or forest will frequent the ecotone while some species will use this zone as their primary habitat. Edges provide wildlife with more options for cover, food and where edges are within riparian areas, water.

All species of wildlife have their own specific set of food and cover requirements that must be met by their habitat. The most beneficial situation, which can be developed to enhance wildlife use of a property, is one of diversity within the property created by promoting multiple age classes and timber types. Wildlife will respond favorably to this increase in habitat diversity because the requirements of more species are likely to be met.

Wildlife Considerations:
This property fits well into the surrounding wildlife habitats. The varying forest conditions and terrain features provide some protective cover for wildlife. Escape and resting cover along with ground level nesting sites are found in the areas of dense seedlings, saplings and pole size trees scattered throughout the woodlot. Nesting sites for a variety of forest dwelling birds and other small animals are found within the multiple level crown canopy and within tree cavities. Food, in the form of browse, is sparse in most of the woodlot, a result of the current developmental stage of the stands found here. There is ample warm-season forage available in the form of herbaceous growth within the woodlot and in the open land. In addition, both hard and soft mast (seed, nuts, fruits, etc.) is found throughout. A number of apple trees are found within the open land. These trees provide a valuable seasonal food supply. Water is also readily available from the springs, streams (both seasonal and permanent) and areas of wetter soils and from succulent summer vegetation.

Recommended Wildlife Activities:

1. Use sound forest management practices to continue to maintain stocking levels that not only increase tree growth and development, but also promote good wildlife habitat characteristics.
2. Maintain a multi-layer crown canopy by retaining a variety of tree species that fall within all of the diameter classes and protecting trees actively used by wildlife.
3. Large woody debris and standing dead trees should be allowed to remain scattered across the site. These features will be utilized by a variety of animal species.

a. Standing dead trees (snags) and live trees with dead tops or branches are an important element of the habitat of many animals. This material often provides sites for nesting, roosting, foraging and other activities. Large snags tend to be more useful to wildlife because they remain viable for specific uses for longer periods of time. The size of snags used most frequently varies among forest types, but snags 15 inches diameter breast height (DBH) and larger usually are preferred as nest sites. Snags of varying sizes should be retained if having a wide spectrum of wildlife species is a management goal.
b. Management for cavity using animals should focus on the retention of live trees with cavities, often called den trees. It is important that the den trees retained be large (greater than 21 inches DBH) to provide habitat for cavity nesting animals.
c. Dead woody material on the ground, especially larger logs, store energy and nutrients, serve as sites for nitrogen fixation, provide favorable moisture conditions for young tree growth and help protect the soil from surface erosion. Many birds eat insects that inhabit rotting logs and numerous species of mammals use logs as sites for reproduction activities, foraging and cover. Forest dwelling amphibians often are found in association with decaying logs on the forest floor.

4. Maintain and culture any mast-producing trees such as red oak and beech at a high enough percentage to continue to provide an important seasonal food supply. Work to promote the overall health and fruit production of the apple trees throughout the open land. Avoid removing trees with signs that animals have climbed them in an attempt to reach the trees' valuable seed crop.
5. Maintain continuous softwood cover in the designated deer wintering areas. It may also be desirable, if the opportunity arises to create breaks in the canopy to establish regeneration that may provide winter browse as a food source.

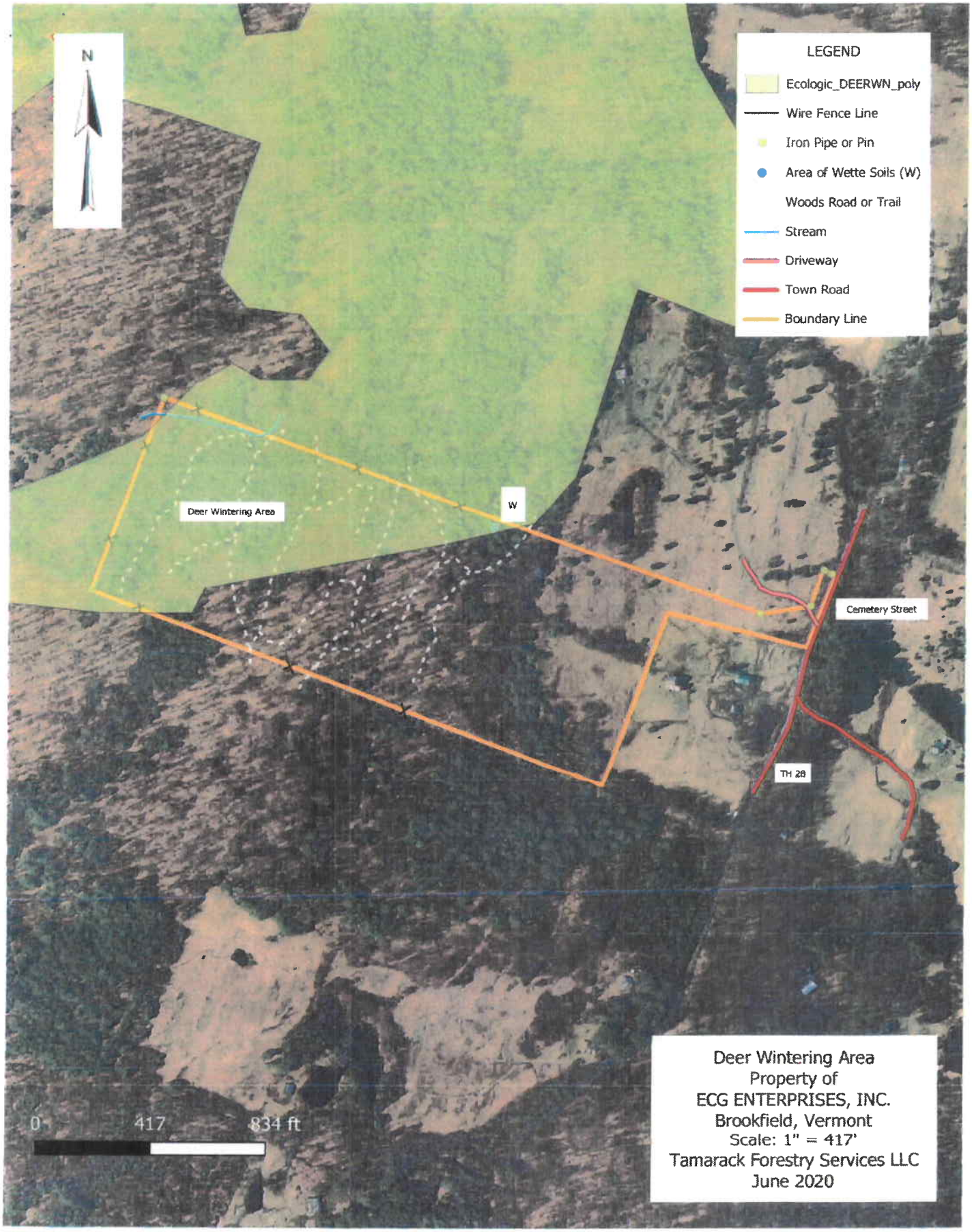
Non-Native (exotic) and Invasive Plants:

Non-native and invasive plants have become common to the forest in our region and throughout New England. Species commonly found in this area include honeysuckle shrubs, Japanese and common barberry, common and glossy buckthorn, autumn olive, wild chervil, Japanese knotweed, burning-bush and purple loosestrife to name only a few. These plants can out-compete our native species and often become the dominant vegetative cover. Invasive plants take advantage of forest disturbances (both natural and man-made) and establish themselves across the available germination sites. They can out-compete our native plants for nutrients, water and light and possess the ability to produce large amounts of seeds and/or reproduce rapidly through root sprouting. Wind, birds, other animals, people, water and products moving from state to state disperse these seeds. These aggressively growing plants, in many situations, can hinder native regeneration important to wildlife habitat, biodiversity and timber production.

At the time that the field cruise for this update was undertaken, no invasive plants were noted, but it is entirely possible and very likely that there are at least individual examples of some of these species established within the borders of this property. In this instance, early detection and quick remediation is the best solution to prevent infestation.

Water Resources:

Several water features are present within the boundaries of this property. A small, intermittent stream forms a channel for a brief distance along the property boundary near the northwestern corner of the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June 2020

woodlot. In the northeastern portion of the woodlot, there is a vernal pool. Both of these features are situated in a such a way that they are easily avoided and protected during harvesting operations.

Protecting water resources from degradation during all future management activities is very important within the working forest. This is accomplished through field identification and mapping of those resources found, along with researching state and federal databases. These features may include springs, seeps, seasonal streams, permanent streams, vernal pools, bogs, wooded wetlands and ponds. If found within the woodlot during the field evaluation those features are identified on the Forest Type Map associated with this management plan indicating the location and types of surface water features identified.

When found, water features are considered sensitive sites and need to be protected from degradation. This is done in a number of ways including proper road and trail layout, correct installation of stream crossings and developing protective buffer strips along streams, drainage-ways and around areas of impounded water (ponds, wetlands, vernal pools). Controlling erosion is extremely important during logging operations and other forest management activities, and then once the activities are completed. During close-out of the operation or completion of trail development it is important to install waterbars and/or board-based dips in skid trails and on truck roads. The waterbars and/or broad-based dips should be spaced at appropriate distances apart to control surface water to eliminate or minimize the chances of erosion. Landing sites also need to be left in a stable condition to minimize erosion. When planning for logging activities it is important to determine if site conditions are suitable, whether treatments can be conducted throughout the year or should be restricted to winter conditions on frozen ground.

To help in the protection of water resources in Vermont, specifically as it relates to forest management activities, the Vermont Department of Forests, Parks and Recreation has developed a set of guidelines titled "Acceptable Management Practices for Maintaining Water Quality on Logging Operations in Vermont", (www.vtfpr.org/watershed/documents/Amp 2019pdf.pdf) referred to as AMP's. These guidelines describe actions that should be taken during timber harvesting operations that should reduce or eliminate the chances of water quality degradation through erosion or any other point-source pollution. All the established guidelines within the AMP's are required for parcels enrolled in the Use Vale Appraisal (UVA) program. For those properties not enrolled in UVA following the guidelines within the AMP's are voluntary unless there is a run-off of soil or other pollutants into the waters surrounding a timber harvesting operation. It will be the responsibility of the landowner, forester and harvesting contractor to be familiar with the AMP's to ensure that all guidelines are being met. Failure to adhere to the AMP's can result in the removal of the property from UVA and may result in fines and/or restoration expenses if pollutants are discharged into surrounding waters. These requirements are to help protect water resources during forest management operations within forestland that the State of Vermont is contributing with property tax reductions (Use Value Appraisal).

Forest Land Description

For the purposes of future management planning, the forest of the ECG property has been separated into three areas or stands. These stands are to be considered as management units however this does not imply that small stands of different forest conditions cannot be found within a general management unit. The stand numbers correspond to those found on the enclosed forest management type map.

The following is a general resource description of the specific forest conditions found on the ECG Enterprises, Inc., property located in Brookfield, Vermont.

Cruising Methods and Information Gathering:

The ECG property was evaluated for this update using a stratified random point sampling cruise performed in May, 2020. Eleven points were sampled within the 28.75 acres of productive forestland. The eleven points were sampled using a 10 basal area factor (BAF) prism, which "counts" trees based on their size in conjunction with distance from plot center. The resulting tree tally was used to calculate basal area, mean stand diameter, number of trees per acre and percentage of composition by species. Information about soils, operability, health, vigor, insect and disease issues, regeneration and wildlife habitat was gathered at each point and throughout the woodlot.

The collected field data was processed through the forest inventory computer program known as NED-2, which was developed by the US Forest Service.

STAND 1

Forest Type: Northern Hardwood	**Acres:** 11.80
Access Distance (to Log Landing): <0.25miles	**Site Class:** 1
Inventory Points Sampled: 6 (using a 10 BAF prism)	**Age Class:** Two-aged
Crown Closure: 80-100%	**Total Tree Heights:** 45-75'
Stand Age: 120+	**Cutting Cycle:** 30 years
Aspect: Variable	**Slope:** 5%- 25%

Management Technique: Uneven-aged, single-tree and small group selection.

Soils Type: Buckland loam, 8% to 25% slopes, very stony. Vershire-Glover-Rock outcrop complex, 8% to 15% slopes.

Stand History and Structure: It is apparent that there have been several timber harvesting entries in the stand which have contributed to the high quality of the stems that are prevalent throughout, especially those trees that make up the overstory. Within the canopy there is a high percentage of sugar maple stems in the medium and large sawlog size classes that have potential to increase in both quality and value in the near future. The smaller diameter classes are largely represented by saplings and small poles of shade tolerant species such as beech and hop-hornbeam, there is also a percentage of sugar maple stems in this diameter class. Regeneration of desirable species is sparse at best, the understory, where

present, consists almost entirely of beech and hop-hornbeam saplings; as regenerating the stand is not a priority at this time, the current state of the understory should not be of great concern.

Topography and Access: Most of this stand is situated on flat to gently sloping terrain at or near the highest elevations on the parcel. The soils are fertile and well drained, with some instances of bedrock being visible near the surface. There is an established trail network that provides good access throughout the stand, though a few upgrades may be required to facilitate harvesting activities.

Species Composition by Percentage of Total Basal Area:

Sugar Maple: 54%	Beech: 19%	Hop Hornbeam: 13%
Hemlock: 8%	Black Cherry: 3%	White Ash: 3%

Total Basal Area (BA): 112 sq. ft./ac.
Acceptable Growing Stock (AGS) Basal Area: 80 sq. ft./ac.
Mean Stand Diameter (MSD): 11.4" **QMD:** 10.4"

Diameter Class Distribution by Basal Area:

Diameter classes: Poles (5" to 9" diameter at breast height [DBH])
Small Sawtimber (10" to 13" DBH), Large Sawtimber (13+ DBH)

	Total Basal Area	AGS Basal Area
Poles*	23	6
Small Sawtimber*	27	17
Large Sawtimber*	62	57

Total Trees per Acre (TPA):

	Total TPA	AGS TPA
Poles	108	23
Small Sawtimber	41	28
Large Sawtimber	40	38
Total Trees Per Acre	189	89

Stocking Level: This stand is almost fully stocked, being just under the A line on the Northern Hardwood Stocking Chart from the "Silvicultural Guide for Northern Hardwoods in the Northeast".

Forest Health: Most trees in the larger diameter classes within this stand are in good health and of good quality. There are scattered examples of common forest insect damage to individual stems, e.g. the native sugar maple borer. The ubiquitous Neonectria complex (beech bark disease) is common among the beech stems in all size classes. No non-native invasive plants were observed during the field cruise, but there may be scattered examples present within the stand. Prudent monitoring for and early detection of invasive plants after thinning activities will be critical to prevent their establishment and spread.

Regeneration: Regeneration is represented throughout the stand by shade tolerant species such as beech and hop-hornbeam in the 3' to 10' height class. Regeneration of more commercially desirable timber species is currently lacking throughout the stand. As noted above, regenerating the stand is not the primary management objective at this time, so this lack of quality regeneration is not of concern. Ample sign of white-tailed deer was observed throughout the property, a high deer population may have an adverse effect on regenerating the stand in the future.

Scheduled Treatment and Prescription: At this time, no commercial treatment is recommended. Though there are trees of good quality and size, the overall stand will benefit from an extended period of growth to reach its fullest potential. There is however, if the opportunity should arise, a volume of trees of firewood/pulp quality that could be removed to improve growth potential for the remaining stand; during such a treatment, a small volume of sawlog stems exhibiting signs of decline could also be removed. If a potential firewood thinning were to occur the basal area would be reduced to about 90 to 95 sq. ft./ac.

Wildlife Considerations: There is abundant sign that deer utilize this stand for feeding and bedding, though palatable browse is sparse, there are ample ferns and herbaceous plants available as a food source during the warmer seasons. Beech nuts may also be plentiful during mast years, which benefit not only deer, but black bear, grouse and wild turkey as well. Black bear pass through the stand and a few beech trees were observed to have bear claw marks engraved into the bark. Wild Turkey scratchings were also observed at the time of the cruise, as were multiple species of songbirds.

Target Tree Diameter: Sugar maple = 22" to 24" DBH, beech = 14" to 16" DBH, white ash = 16" to 18" DBH, black cherry = 16" to 18" DBH and hemlock = 14" to 16" DBH.

Re-evaluation of Stand: 2030

Long Term Objective: The long term goals for managing this stand are to develop quality sawtimber, pulp and fuelwood, while maintaining or improving wildlife habitat. Timber harvest and management activities conducted on a periodic basis will serve to maintain or increase the residual stand quality. The use of single-tree and small group selection techniques will allow timber quality to be improved, regeneration to become established and to increase diversity within the structure of the stand.

STAND 2

Forest Type: Mixed Hemlock/Hardwood	**Acres:** 13.30
Access Distance (to Log Landing): < 0.5 miles	**Site Class:** 2
Inventory Points Sampled: 4 (using a 10 BAF prism)	**Age Class:** Two-aged
Crown Closure: 80-100%	**Total Tree Heights:** 40-70'
Stand Age: 100+	**Cutting Cycle:** 20 yrs
Aspect: Southwesterly	**Slope:** 5%-35%

Management Technique: Uneven-aged, using single tree and small group selection techniques.

Soils Type: Buckland loam, 8% to 25% slopes, very stony, Vershire-Glover-Rock outcrop complex, 8% to 25% slopes. There is a small inclusion of Peacham mucky peat along the northern edge of the stand.

Stand History and Structure: This stand, has representatives from all diameter classes. The predominant species here is hemlock mixed with various types of hardwoods. This area was thinned in 2001, and very likely at least once before that. Overall, there is a lack of herbaceous or low woody growth in the stand; regeneration, aside from extremely shade tolerant hardwoods, is non-existent.

Topography and Access: This stand lies at the northern edge and western end of the woodlot. Terrain is gently sloping with occasional steeper areas separated by relatively narrow, flat "benches". These benches are where the established trails cross the width of the stand. In order to facilitate timber extraction, these trails will require some minor directional modifications. Aside from uphill extraction, the area presents few topographical limitations to future management activities.

Species Composition by Percentage of Total Basal Area:

Hemlock: 48%	Sugar Maple: 32%	Beech: 10%
Yellow Birch: 7%	Hop Hornbeam: 3%	

Total Basal Area (BA): 150sq. ft./ac.
Acceptable Growing Stock (AGS) Basal Area: 122 sq. ft./ac.
Mean Stand Diameter (MSD): 12.0". **QMD:** 9.0"

Diameter Class Distribution by Basal Area:

Diameter classes: Poles (5" to 9" diameter at breast height [DBH])
Small Sawtimber (10" to 13" DBH), Large Sawtimber (13+ DBH)

	Total Basal Area	AGS Basal Area
Poles*	52.5	32.5
Small Sawtimber*	27.5	22.5
Large Sawtimber*	70	67.5

Total Trees per Acre (TPA):

	Total TPA	AGS TPA
Poles	217	121
Small Sawtimber	46	37
Large Sawtimber	48	47
Total Trees Per Acre	311	205

Stocking Level: This stand is well stocked, falling about half-way between the A and B lines on the mixed-wood stocking guide from "The Silvicultural Guide for Northern Hardwoods in the Northeast".

Forest Health: Overall, this stand appears to be in good health. No invasive plants or unusual forest pest activity were noted at the time of the field cruise. Beech bark disease is present and fairly common among the stems of that species. Some of the larger hemlock and hardwoods are displaying signs of internal decay, which is to be expected in a stand of this age.

Regeneration: Desirable regeneration is lacking in abundance, largely due to the dense canopy and browsing. Beech and hop-hornbeam saplings are present where single tree selection occurred in 2001.

Scheduled Treatment and Prescription: This stand, much like the hardwood area, requires additional growth before a commercial timber harvest is undertaken. The current timber size and potential harvest volumes are too small to be considered an economically viable timber sale. However, there is potential to improve the stand quality and wildlife habitat should a non-commercial treatment be desired. No treatment is prescribed at this time, but opportunities to implement timber stand improvement (TSI) activities should be considered.

Wildlife Considerations: This area, with its softwood component, may offer cover and travel opportunities for many types of wildlife. Browse, foraging and dense cover opportunities are sparse on the forest floor. The canopy does offer forage and cover for multiple species of perching birds, and large decaying stems provide habitat for woodpeckers, cavity nesters, and many smaller invertebrates. This stand is within a mapped deer wintering area; the winter cover and winter food source requirements of deer will be taken into consideration when making management decisions.

Target Tree Diameter: Hemlock = 18" to 20" DBH, sugar maple = 20" to 22" DBH, beech = 14" to 16" DBH and yellow birch = 18" to 20" DBH

Re-evaluation of Stand: 2030

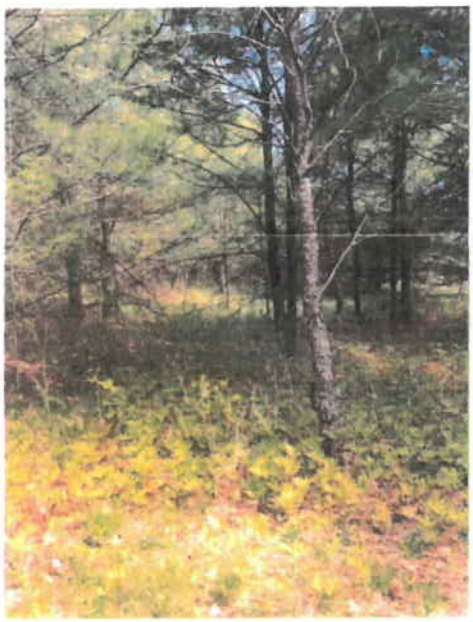
Long Term Objective: The objective for this stand is the continued development of a healthy and productive forest that will sustainably produce quality sawlogs, pulp and fuelwood, while maintaining or improving habitat for wildlife.

STAND 3

Forest Type: Mixedwood/ Pioneer mixedwood	**Acres:** 3.65
Access Distance (to Log Landing): <0.1 miles	**Site Class:** 2
Inventory Points Sampled: 2 (using a 10 BAF prism)	**Age Class:** Even-aged
Crown Closure: 25-100%	**Total Tree Heights:** 22'-55'
Stand Age: 35-45 years	**Cutting Cycle:** Undetermined
Aspect: Southeasterly	**Slope:** 3%- 8%

Management Technique: Undetermined, the predominant forest cover requires additional growth.

Soils Type: Vershire-Glover-Rock outcrop complex, 8% to 25% slopes, Cabot silt loam, 0% to 8% slopes.



Stand History and Structure: This small stand has arisen from agricultural land that was abandoned and has been re-establishing as a mixed forest type. The portion of the stand that is closest to the established hardwoods of Stand 1 is comprised of large saplings/small poles of common northern hardwood species. At the time of this writing the white ash component has exhibited the fastest growth and is reaching small pole size. The sugar maple stems, though more numerous, are too small to be counted in the prism tally due to the species slower growth rate. Elsewhere, a pioneer mixture of white pine, black cherry, red spruce and balsam fir is present, and continuing to expand into other open areas. There are several examples of large weevil damaged white pine that were likely present when the area was mostly open land.

Topography and Access: This stand is readily accessed from the parcel's open land. It is relatively flat and there are several wet areas that can easily be protected during future harvesting activities.

Species Composition by Percentage of Total Basal Area:

White Ash:75%	White Pine: 25%	

Total Basal Area (BA): 80 sq. ft./ac.
Acceptable Growing Stock (AGS) Basal Area: 60 sq. ft./ac.
Mean Stand Diameter (MSD): 7.0". **QMD:** 6.5"

Diameter Class Distribution by Basal Area:

Diameter classes: Poles (5" to 9" diameter at breast height [DBH])
Small Sawtimber (10" to 13" DBH), Large Sawtimber (13+ DBH)

	Total Basal Area	AGS Basal Area
Poles*	70	60
Small Sawtimber*	10	0
Large Sawtimber*	0	0

Total Trees per Acre (TPA):

	Total TPA	AGS TPA
Poles	334	283
Small Sawtimber	13	0
Large Sawtimber	0	0
Total Trees Per Acre	347	283

Stocking Level: The stocking level is variable; some areas are fully stocked with hardwood saplings/small poles while other areas have lower stocking levels.

Forest Health: The hardwood stems in this stand are generally of good health and form, with no noticeable disease or insect problems. The white pine component displays damage caused by white pine weevil activity and will not develop into a quality timber resource.

Regeneration: Regeneration is lacking but of no consequence at this point in the stand's development.

Scheduled Treatment and Prescription: No treatment is prescribed at this time.

Wildlife Considerations: This area offers nesting, foraging, and cover to many species of wildlife. Multiple species of migratory songbirds make use of the dense structure found here. Wild turkey and grouse utilize this type of cover for nesting and brooding their young. White-tailed deer sign is common, indicating that this area is used for bedding and feeding.

Target Tree Diameter: Undetermined at the time of this writing.

Re-evaluation of Stand: 2030

Long Term Objective: To develop this area into a healthy and productive forest stand that will produce quality and sustainable forest products while maintaining or improving habitat for wildlife.

Open Land: 1.5 Acres Enrolled
6.70 Acres Excluded

The open land should be maintained through periodic mowing. Maintaining these open areas adds to the aesthetic qualities of the property and surrounding areas, and provides important habitat elements to wildlife not seen in other portions of the property such as specialized habitat within the transitional edge from forest to field, and escape cover in small islands of trees and shrubs. As the open land is managed into the future, if possible, keeping islands of trees and shrubs and the transitional edge from field to forest intact is important to increasing diversity and beneficial to wildlife.

Summary

The ECG Enterprises, Inc. property represents a healthy and diverse ownership that fits well into the surrounding landscape and local wildlife habitat. The majority of the forested acreage is comprised of good quality trees with a high potential timber value.

In the future, as forest management is implemented, if outside contractors are used to carry out prescribed treatments, a forester should closely supervise these activities. In all situations, care should be taken to leave treated areas aesthetically pleasing by keeping slash (logging debris; tops, branches, etc.) cut close to the ground. Slash must be removed from all stream/drainage channels and the AMPs need to be strictly adhered to. Wetlands, wet areas and streams will be protected during harvesting through the establishment of appropriate buffer strips.

Invasive plants will undoubtedly become a greater management concern for this and all properties in the future. All landowners need to be vigilant and monitor for the advanced establishment of undesirable plant communities and react quickly and effectively when necessary.

The property and this planning document qualify for enrollment in the Certified category of the Tree Farm program. Enrollment in the Tree Farm program identifies this woodlot as sustainably managed and green certified and may increase the value and marketability of wood products generated in the future. For more information, visit www.vermontwoodlands.org and visit the Tree Farm program site.

FOREST MANAGEMENT SCHEDULE

2020- Ongoing	Monitor for the advancement of invasive plant communities and begin control measures as necessary and when possible.

Re-evaluate entire property and update UVA forest management plan as required prior to April 1ST 2031.

USE VALUE APPRAISAL PARCEL DATA ENTRY FORM

☐ new ☒ update[1] ☐ amendment[2] ☐ change of ownership

FP&R COUNTY FORESTER USE ONLY

Parcel ID For Data Entry (by state) # __ __ __ __ __, __ __ __ __ __ __ __ __ __ __ __ __

Year of Plan _____

Year of Entry _____

Year of Last Inspection _____

1) Landowner Name (last name, first name) ECG Enterprises, c/o Charles G. Isenberg

2) Landowner Address (Street, PO Box) 12 Wessel Lane

(Town) Medford (State) NY (Zip Code) 11763

Phone Number (917) 279-9087 Email Address Greg.isenberg@ecgenterprises.com

3) Town That Parcel Is In Brookfield 4) Total Forestry Acres in Parcel 28.75 (Grand list acreage, minus active agricultural and open land and exclusions)

5) Plan Preparer (last name, first name) Miraldi, Len 6) Previous Owner (last name, first name) _____

7) SPAN 096-030-10395

8) Stand information (this information is for data entry only and does not override what is in actual plan):

Stand #	Acres	Even-aged Uneven-aged (existing)	Predominant Site Class (I, II, III or IV)	Stand Type	Quadratic M.S.D.	Total BA	AGS BA	Management Activities	Treatment Year
1	11.80	even	I	06	10.4	112	80	12	
2	13.30	even	II	04	9.0	150	122	12	
3	3.65	even	II	11	6.5	80	60	12	

[1] Update of an existing plan that includes all new stand descriptive data required every 10 years at minimum.

[2] Change to an approved existing plan does not change the 10-year cycle of the existing plan. If this form is filed with an amendment, indicate the amended information in the appropriate stand, and write an explanation in section 12. Amendments must be signed by the landowner(s).

9) No activity – (identify stand # and reasons) All stands not scheduled for work have either been treated or are well stocked with no need for teatment at this time.

10) Management Activities – other (identify stand #) _____

11) Stand Types – other (identify stand #) _____

12) Amended prescriptions – (identify stand #) _____

STAND TYPES	CODE #
aspen and/or white birch	01
white pine, red oak	02
white pine	03
hemlock	04
sugar maple	05
beech, birch, sugar maple	06
beech, red maple	07
spruce	08
spruce/fir	09
pioneer species	10
mixed wood (25%-65% softwood)	11
other (identify other in section 11)	12
ESTA	13
open	14
significant wildlife habitat	15
special places and sensitive sites	16
miscellaneous	17

MANAGEMENT ACTIVITY CODES (if one of the following choices reasonably describes the planned management activity, use it. If not use #13 other and describe the management activity in Section 10. Note these descriptions are for choosing codes only; they are not the silvicultural standards).

1. Non-commercial forest stand improvement

EVEN-AGED MANAGEMENT

2. Intermediate thinning
3. Shelterwood cut
4. Overstory removal cut
5. Clearcut
6. Progressive clearcutting

UNEVEN-AGED MANAGEMENT

7. Single Tree Selection
8. Group Selection

MISCELLANEOUS CHOICES

9. Salvage cut
10. Sugarbush management
11. Species conversion
12. No Activity
13. Other
14. Crop Tree Release
15. Invasive Species Control